DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-015961
Date Inspected: 29-Jul-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 630
OSM Departure Time: 1500
Location: Job Site

CWI Name: See below

Inspected CWI report:	☑ Yes	☐ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified 4W/5W, and the following observations were made:

4W/5W-B

The QA Inspector randomly observed the ABF welder Xiao Jian Wan preheat the weld joint to 200°F prior to performing the flux cored arc welding (FCAW) utilizing the induction heating blankets.. The QA Inspector randomly verified the minimum required preheat utilizing a 200°F temperature indicating marker. The QA Inspector noted the weld was started on the previous day shift. The QA Inspector noted the material was maintained over night at the minimum required 200°F due to the thickness of the base material. The QA Inspector randomly observed the ABF welder continue to perform the FCAW back weld. The QA Inspector noted the back weld appeared to be approximately 60% complete upon the arrival of the QA Inspector. The QA Inspector randomly observed the SE QC Inspector Tony Sherwood monitoring and recording the in process welding parameters. The QA Inspector randomly observed and verified the FCAW parameters and they were 225 Amps, 21.5 Volts and a travel speed of 210mm/min. The QA Inspector noted the FCAW parameters appeared to be in general compliance with ABF-WPS-D1.5-3110-3. The QA Inspector noted the ABF welder was performing the FCAW fill passes of the back weld for the remainder of the QA Inspectors shift.

4W/5W-E2

The QA Inspector randomly observed the QC Inspector Tony Sherwood perform visual testing (VT) of the above identified weld joint. The QC Inspector informed the QA Inspector the weld joint was acceptable. The QA

Inspector performed random dimensional verifications and VT of the accepted fit up. The QA Inspector noted the fit up and dimensional tolerances appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder Song Tao Hunag had previously started the induction heating blankets on the inside of OBG to ensure the minimum required preheat of 150°F was achieved prior to welding. The QA Inspector randomly verified utilizing a 150°F temperature indicating marker and noted the minimum required preheat had been achieved. The QA Inspector observed the ABF welder to be utilizing the semi automated flux cored arc welding (FCAW) for the above identified weld joint. The QA Inspector randomly observed the Smith Emery (SE) QC Inspector identified as Tony Sherwood set the FCAW machine to the parameters of the approved WPS identified as ABF-WPS-D1.5-3042-B-1 The QA Inspector randomly observed the FCAW parameters were 236 Amps, 24.1 Volts and a travel speed of 250mm/min.The QA Inspector noted the ABF welders spent the remainder of the shift performing the FCAW root/fill passes.

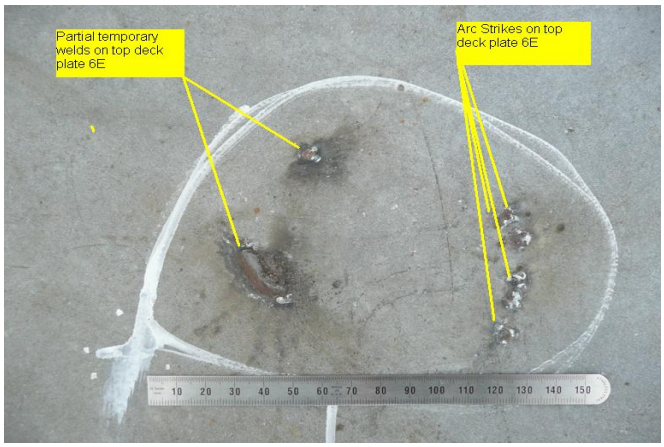
South Tower Shaft

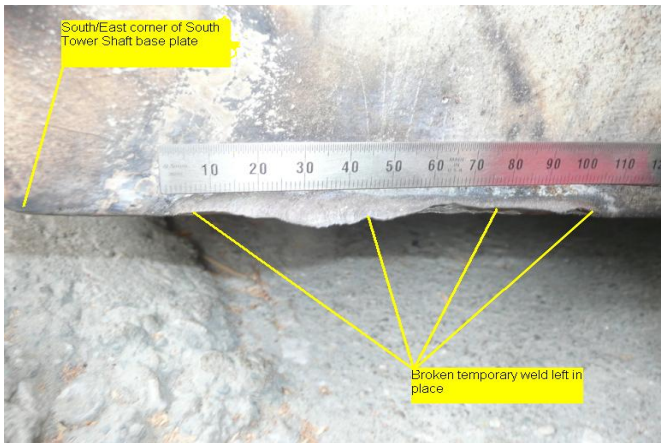
Upon a random visual inspection the QA Inspector observed a temporary weld which had appeared to have been broken off and left in place. The QA Inspector observed the temporary weld was located on the south east corner of the south tower shaft base plate (pictured). The QA Inspector informed the QA Task Lead Inspector Bill Levell of the temporary weld. The QA Inspector noted due to the location of the temporary weld id would be covered and no access would be available after the additional erection of the tower segments was placed. The QA Inspector informed the Caltrans Structures Representative Sami Daouk of the weld. The QA Inspector informed Mr. Daouk an incident report would be written and submitted for review.

Lift 6E

Upon random visual inspection of the top deck plate of the above identified lift, the QA Inspector discovered remnants of a temporary weld and multiple arc strikes. The QA Inspector noted the temporary weld appeared to had been broken off and partially removed, but the QA Inspector noted no grinding or blending appeared to had been performed. The QA Inspector submitted and incident report regarding the temporary weld. The QA Inspector informed the SE Lead QC Inspector Mike Johnson of the Incident report and the location of the arc strikes and temporary weld. Mr. Johnson informed the QA Inspector he would “take a look at the area”.

In addition the QA Inspector informed the Caltrans Structures Representative Jason Wilcox of both of the Incident Reports identified above. Mr. Wilcox informed the QA Inspector he would pass the information about the tower shaft base plate on to the Caltrans Structures Representive Doug Wright.





WELDING INSPECTION REPORT

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Summary of Conversations:

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916)-813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Bettencourt,Rick	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer